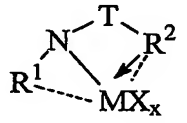
CLAIMS:

1. A process for preparing interpolymers of ethylene and one or more C_{3-8} olefin monomers comprising contacting a monomer mixture comprising ethylene and one or more C_{3-8} olefin monomers with a catalyst composition comprising a Group 4 metal complex of a polyvalent, Lewis base ligand under addition polymerization conditions.

2. A process according to claim 1 wherein the metal complex corresponds to the formula:


(IA)

wherein

R^1 is selected from alkyl, cycloalkyl, heteroalkyl, cycloheteroalkyl, aryl, and inertly substituted derivatives thereof containing from 1 to 30 atoms not counting hydrogen;

T is a divalent bridging group of from 1 to 20 atoms other than hydrogen, preferably a mono- or di- C_{1-20} hydrocarbyl substituted methylene or silane group, and

R^2 is a C_{6-20} heteroaryl group containing Lewis base functionality, especially a pyridin-2-yl- or substituted pyridin-2-yl group,

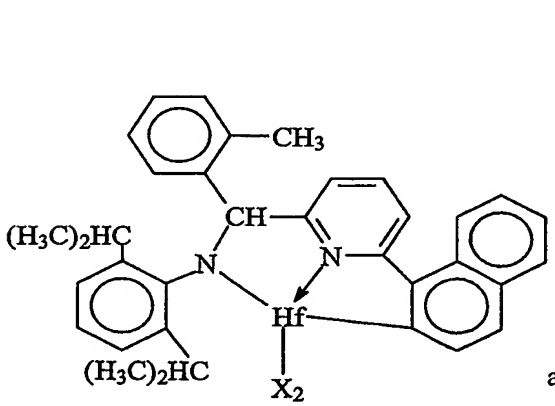
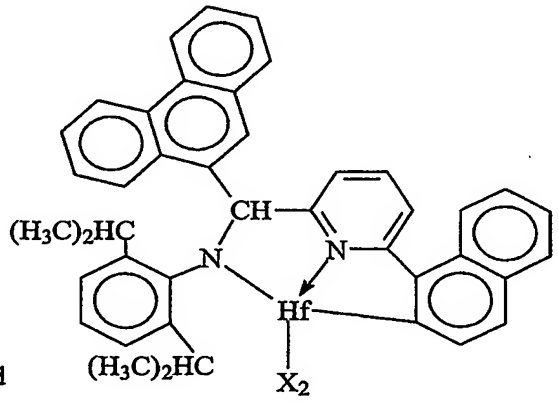
M is the Group 4 metal, preferably hafnium,

X is an anionic, neutral or dianionic ligand group,

x is a number from 0 to 5 indicating the number of such X groups, and

bonds, optional bonds and electron donative interactions are represented by lines, dotted lines and arrows respectively.

3. A process according to claim 2 wherein the metal complex is selected from the group consisting of:


and


wherein X each occurrence is halide, N,N-dimethylamido, or C_{1-4} alkyl.

4. A process according to claim 1 wherein a mixture comprising propylene and from 0.1 to 10 weight percent ethylene is copolymerized.